

Comprehensive Plan Advisory Panel Meeting #8

May 15, 2017

Agenda

1. April 17th Meeting Notes
2. Comp Plan Process and Schedule
3. Vision and Goals – Transportation Chapter
4. Transportation Topics
 - A. Bike Lane Types
 - B. Orange Line BRT
 - C. East/West Transit Plan
5. Transportation System Discussion
 - A. Change in Modelling
 - B. Observations about local issues and challenges
6. Autonomous Vehicles
7. Public Comments
8. Next Steps

Process and Schedule

Burnsville Comprehensive Plan - Task Schedule

2016-2017		MAY '16	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN '17	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
TASKS	TASK 1 Organizing the Process																			
	TASK 2 Community Outreach Plan and Implementation Tools																			
	TASK 3 Evaluate the Current Burnsville Comprehensive Plan																			
	TASK 4 Current and Future Issues																			
	TASK 5 Update the Current Plan Chapters																			
	TASK 6 Review and Analyze Technical Chapters																			
	TASK 7 Conduct Plan Review and Seek Approvals																			
MEETINGS	Advisory Panel/ Planning Commission (13)																			
	City Council (5)																			
	EDC (4)																			
	Staff Technical Committee (as needed)																			

Burnsville Comprehensive Plan - Meetings Schedule

CITY COUNCIL MEETING – MAY 10, 2016

Agenda:

- » Project Overview
- » Review Panel
- » Community Outreach
- » Schedule

ADVISORY PANEL MEETING – JULY 18, 2016

Agenda:

- » What is a Comprehensive Plan?
- » Metropolitan Council and Thrive 2040
- » Planning Process and Timeline
- » Focus Areas
- » Community Engagement

ADVISORY PANEL MEETING – SEPTEMBER 19, 2016

Agenda:

- » Community Engagement
 - Input Received So Far
 - Community Engagement Plan
- » Focus Areas Discussion
 - Aging Industrial
 - Heart of the City (HOC)
 - Orange Line Bus Rapid Transit (BRT) Station Areas
 - Minnesota River Quadrant (MRQ)
- » Community Enrichment Plan
 - Youth Plan Chapter will be broadened into a Community Enrichment Chapter in 2040 Comprehensive Plan

ADVISORY PANEL MEETING – NOVEMBER 7, 2016

Agenda:

- » Summary of Focus Areas Charrette
- » Heart of the City (HOC) Focus Area
 - HOC 2 district concept
 - Orange Line Bus Rapid Transit (BRT) station areas concept
 - Vision elements
- » East Cliff Road Industrial District Focus Area
 - District concept
 - Vision elements
- » Minnesota River Quadrant (MRQ) Focus Area
 - High level concept
 - Vision elements

MAYOR'S CEO ROUNDTABLE – DECEMBER 9, 2016

Agenda:

- » What is a Comprehensive Plan
- » Review Panel
- » Focus Areas
 - Focus Areas Charrette
 - Heart of the City (HOC) and BRT Station Areas
 - East Cliff Road Business Park
- » Minnesota River Quadrant (MRQ)
- » Schedule

CITY COUNCIL MEETING – JANUARY 10, 2017

Agenda:

- » Comprehensive Plan Process Update

ECONOMIC DEVELOPMENT COMMISSION – JANUARY 11, 2017

Agenda:

- » Overview/Observations/Discussion – East Cliff Road Business Park (Larc Industrial Area)
- » Overview – Minnesota River Quadrant (MRQ)
- » Overview – Heart of the City (HOC)/Transit Improvements

ADVISORY PANEL MEETING – JANUARY 30, 2017

Discussion Topic(s):

- » Comprehensive Plan Process/Schedule Review
- » Future Land Use and Community Design
 - Vision and Objectives
 - Goals, Policies and Strategies
 - Vacant Land
 - Major Community Areas
 - Burnsville Center
 - Fairview Ridges
 - Southcross Center
 - Aging Retail Strip Centers

ECONOMIC DEVELOPMENT COMMISSION – FEBRUARY 8, 2017

Discussion Topic(s):

- » Heart of the City(HOC)/Transit
- » Minnesota River Quadrant (MRQ)

ADVISORY PANEL MEETING – FEBRUARY 27, 2017

Discussion Topic(s):

- » Comprehensive Plan Process and Schedule Review
- » Vision and Goals - Housing Plan Chapter
- » Vision and Goals - Neighborhood Plan Chapter
- » Housing Review

ADVISORY PANEL MEETING – MARCH 20, 2017

Discussion Topic(s):

- » Comprehensive Plan Process and Schedule Review
- » Vision and Goals - Economic Development Chapter
- » Focus Areas - Implementation Overview
- » Economic Competitiveness

CITY COUNCIL – APRIL 11, 2017

Discussion Topic(s):

- » Comprehensive Plan Process Update

ADVISORY PANEL MEETING – APRIL 17, 2017

Discussion Topic(s):

- » Community Enrichment End Statement & Outcomes
- » Burnsville Demographics Snapshot
- » Vision and Goals - Youth/Community Enrichment Chapter
- » Community Enrichment Plan Approach

ECONOMIC DEVELOPMENT COMMISSION – MAY 10, 2017

Discussion Topic(s):

- » Economic Competitiveness
- » Implementation Strategies

ADVISORY PANEL MEETING – MAY 15, 2017

Discussion Topic(s):

- » Transportation

ADVISORY PANEL MEETING – JUNE 19, 2017

Discussion Topic(s):

- » Natural Environment and Parks

CITY COUNCIL – JULY 11, 2017

Discussion Topic(s):

- » Comprehensive Plan Process Update

ADVISORY PANEL MEETING – JULY 31, 2017

Discussion Topic(s):

- » City Services and Facilities

ADVISORY PANEL MEETING – AUGUST 21, 2017

Discussion Topic(s):

- » Review Draft Plan

ECONOMIC DEVELOPMENT COMMISSION – SEPTEMBER, 2017

Discussion Topic(s):

- » Review Draft Plan – Economic Development and Redevelopment

ADVISORY PANEL MEETING – SEPTEMBER 18, 2017

Discussion Topic(s):

- » Review Draft Plan

ADVISORY PANEL MEETING – OCTOBER, 2017

Discussion Topic(s):

- » Planning Commission Public Hearing on Draft Plan Recommendation to City Council

CITY COUNCIL – OCTOBER, 2017

Discussion Topic(s):

- » Review Draft Plan - Approve Plan Submitted to City Council/Planning Commission

Meeting Key

COMPLETED MEETINGS IN ITALICS

FUTURE MEETINGS IN REGULAR

Type of Meeting

 City Council

 Advisory Panel

 Economic Development Commission

Note: This listing of meetings will be updated on a regular basis and discussion topics are subject to change. Meeting dates may be modified and additional meetings may be added as well.

5/8/2017



Hoisington Koegler Group Inc.

Vision, Goals and Strategies – Economic Development Chapter

Current End Statement & Outcomes

End Statement for Transportation

People find Burnsville a community with an effective, multi-modal transportation system connecting people and goods with destination points.

Outcomes

1. People feel that the transportation system is effective for connecting them to their destination points.
2. People feel that multiple methods of transportation are easily available, safe and convenient.
3. People feel that the community roadway system is well maintained at a reasonable cost.

Outcomes

4. Transportation system adequately serves existing businesses.
5. The safety, longevity and quality of our residential neighborhood streets are maintained, improved or enhanced.
6. New initiatives for transportation funding by MnDOT and Dakota County will be supported when city and county businesses are not disadvantaged.

Current Vision and Objective

Vision

People find Burnsville a community with an effective, multi-modal transportation system connecting people and goods with destination points.

Objective

Burnsville will play a major role in determining solutions to regional transportation problems, increase capacity for crossing the Minnesota River, reduce traffic congestion and improve traffic flow in Burnsville, expand use of transit service, develop user friendly bike and walking trails which will support recreational opportunities and link people to jobs and business locations.

Current Goals

1. Prioritize transportation planning efforts in accordance with the Comprehensive Plan, which will be periodically reevaluated and modified to respond to changing conditions.
2. Develop and advocate for an environmentally sensitive transportation system that safely and efficiently moves people and goods.
3. Work to integrate alternative transportation modes (transit, pedestrian, biking, others) into the existing and future transportation system.
4. Provide a transportation system that efficiently serves all modes of travel throughout the community.

Current Goals

5. Mitigate traffic congestion and improve traffic flow in all areas of the community.
6. Play a major role in determining solutions to regional transportation problems.
7. Protect city interests regarding airport, rail and highway noise pollution and minimize noise in Burnsville.
8. Continue to support the Minnesota Valley Transit Authority (MVTA) as a primary transit provider for the city and coordinate development review and transportation improvements to maximize transit opportunities.
9. Utilize available funding sources to receive land and cash payments for development of the city's park and trail systems.

Current Strategies

- A. Play a major role in determining solutions to regional transportation problems.
- B. Increase crossing capacity over the Minnesota River.
- C. Reduce traffic congestion in Burnsville.
- D. Improve traffic flow in Burnsville.
- E. Expand use of transit services.
- F. Improve the bike and pedestrian trail systems interconnecting parks, schools, scenic areas, civic areas, employment centers and amenities within the city.
- G. Develop user-friendly bike and walking trails which will support recreational opportunities, healthy living and link people to jobs, business/employment locations.

Transportation Topics

Bike Lanes

Bike Lanes

- Exclusive space for bicyclists
- Typically 5-6' wide
- Collector or Minor Arterials
- Moderate traffic volume
- Colored pavement or skip striping can be used in “conflict zones”
- Can be “buffered” with added striping between bike and auto lane

Bike Lane





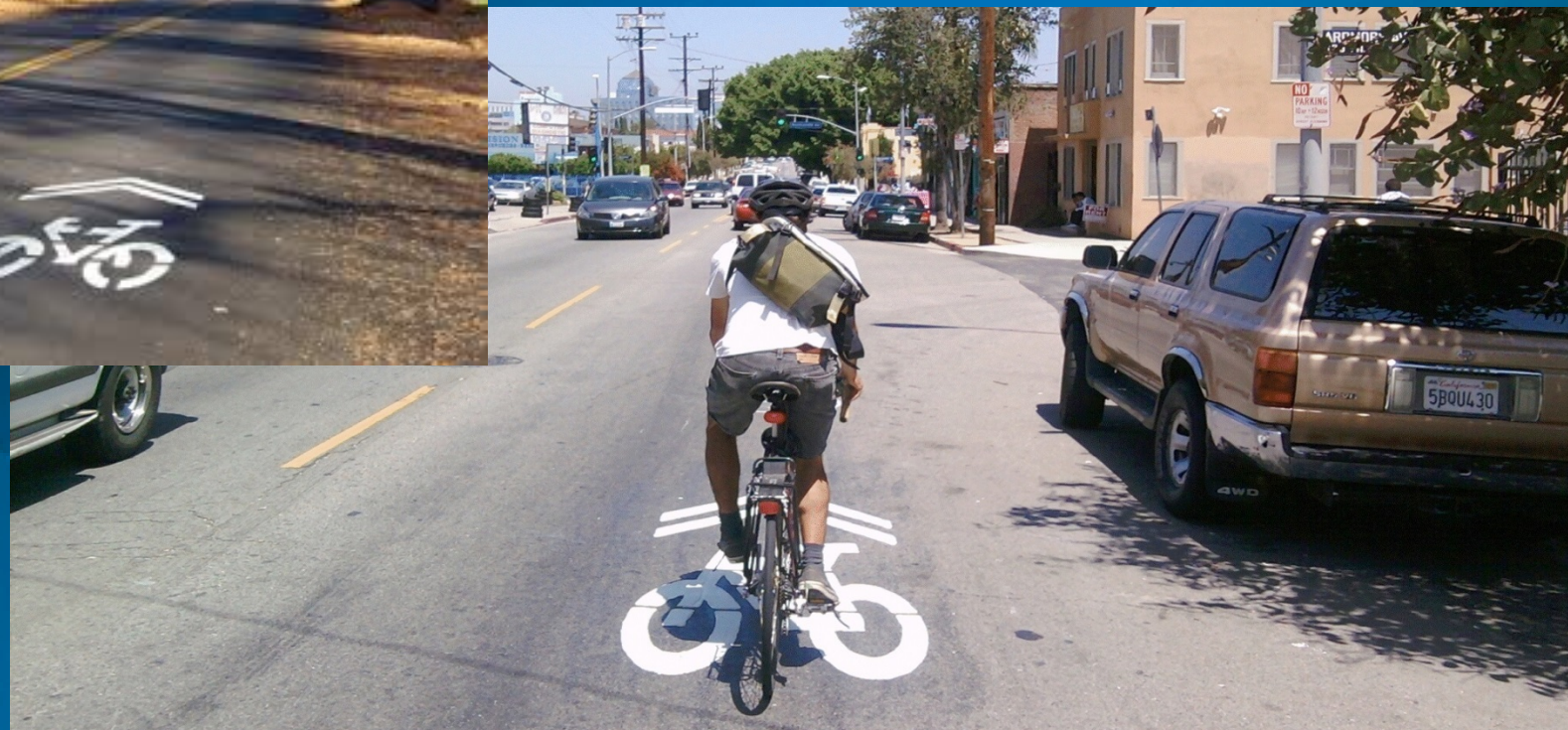
Buffered Bike Lane



Shared Lane Markings – Sharrow

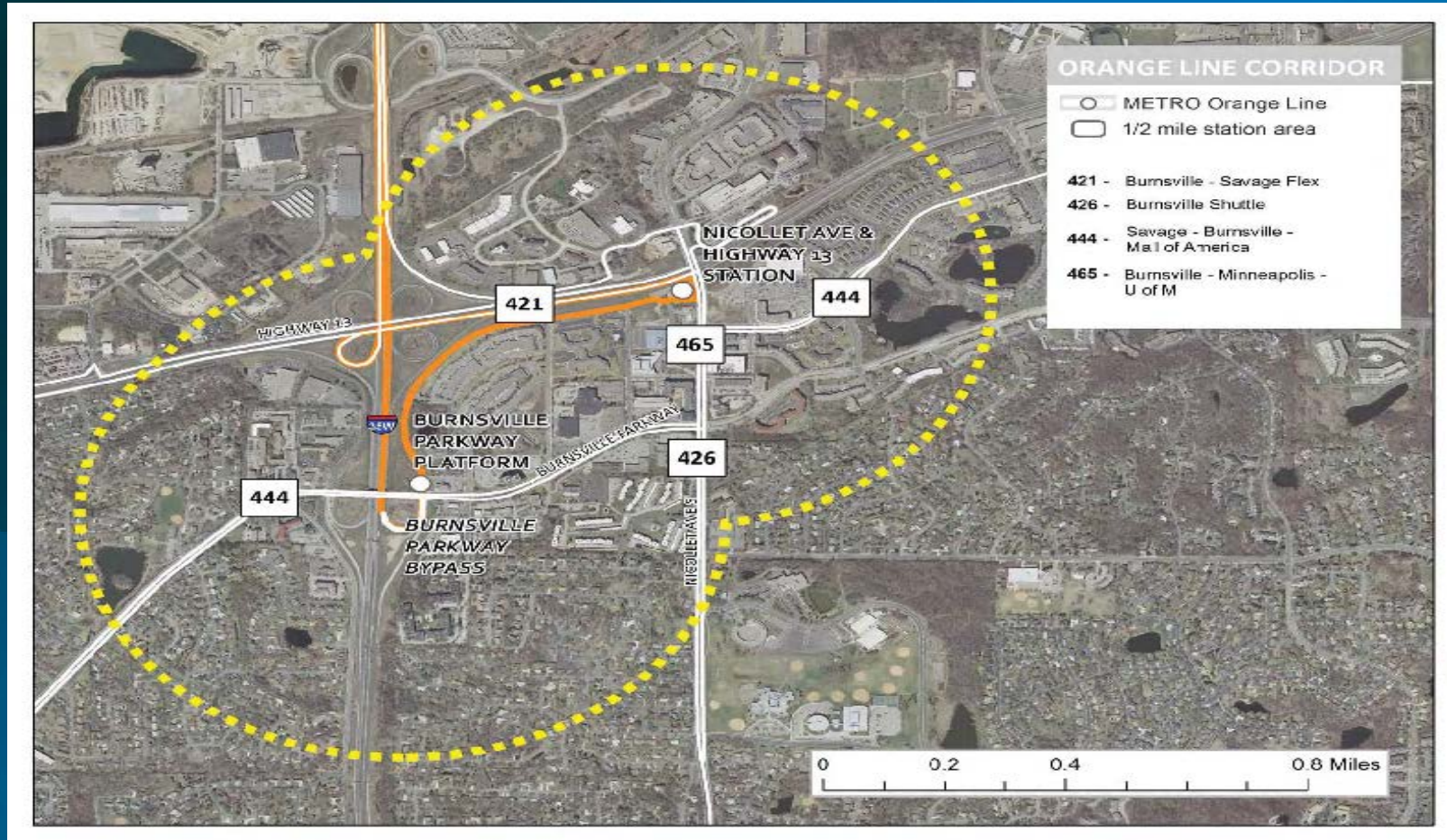
- Shared space for bicyclists and autos
- Reinforce legitimacy of bicycle traffic on the street
- Marking recommends proper bicyclist positioning – avoid car doors
- Low traffic volume
- Also used to fill gaps in bike lane routes for short segments

Shared Lane Markings – Sharrow



Orange Line BRT

BRT – Orange Line



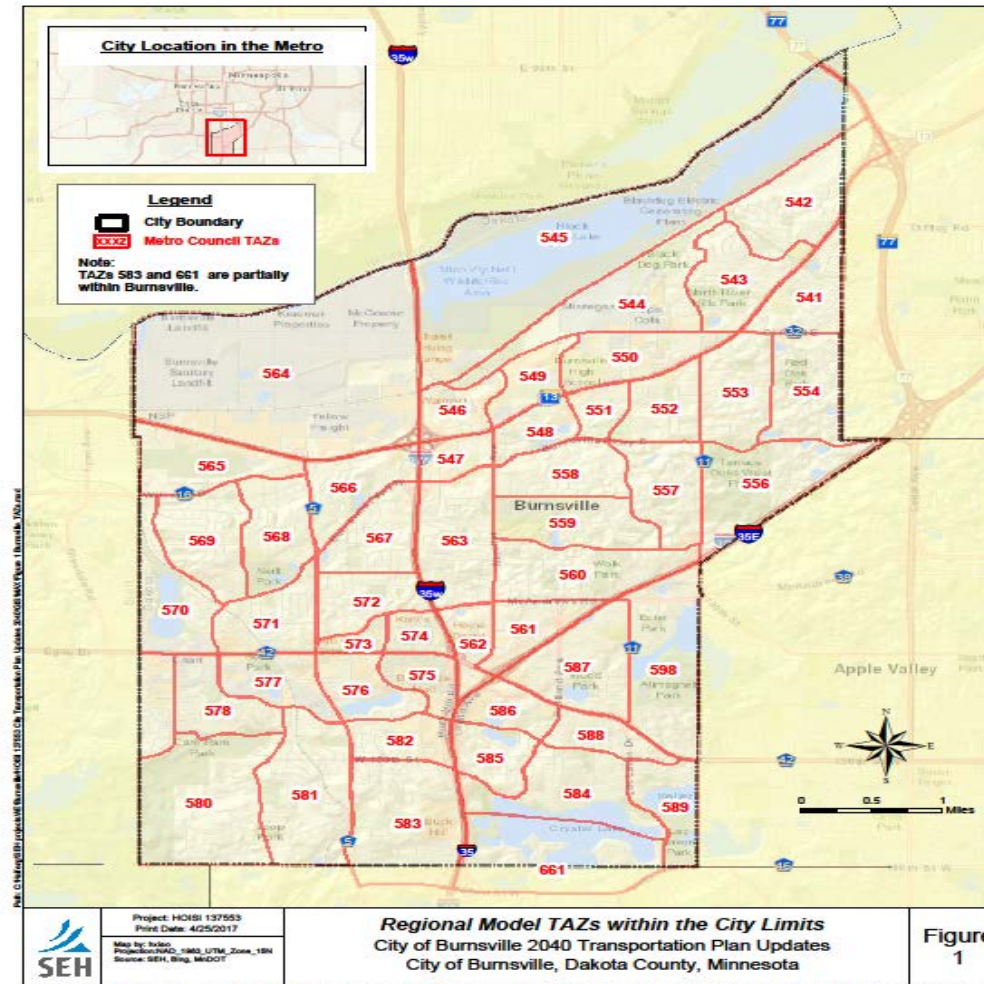
East/West Transit Study



Transportation System Discussion

Change in Modelling

Traffic Forecasts



Local Transportation Observations

What are your thoughts about transportation in Burnsville?

- Consider:
 - Roadways
 - Biking
 - Walking
 - Commuting
 - Transit
 - Proximity to MSP

Autonomous Vehicles (AVs)

Autonomous Vehicles

“Your old road is rapidly agin’
For the times they are a-changin’”

Bob Dylan



- Inefficient use of resources – average car parked over 22 hours per day
- Required storage space for millions of vehicles that are each used for only 9% of the year
- User needs are not constant – For example, commute needs are different from hunting trips – Car vs. Big Truck
- Substantial portion of the population can't drive – age, disabilities, income, etc.

Current System – Private, Self-Driven Vehicles

- Worldwide, nearly **1.3 million people die** in road crashes each year – averages 3,287 deaths per day.
- Additional 20 – 50 million are injured or disabled.
- Road crashes cost the **US \$236.6 billion per year** or an average of \$820 per person.
- Road crashes are the leading cause of death for 15 – 29 year olds.
- **37,000+ deaths** per year in the US.
- **411 deaths in MN** in 2015.
- Deaths in other states with comparable populations: 849 in AL, 546 in CO, 869 in MO, 977 in SC and 566 in WI.

Current System – Safety Issues

Autonomous Vehicles (AVs)

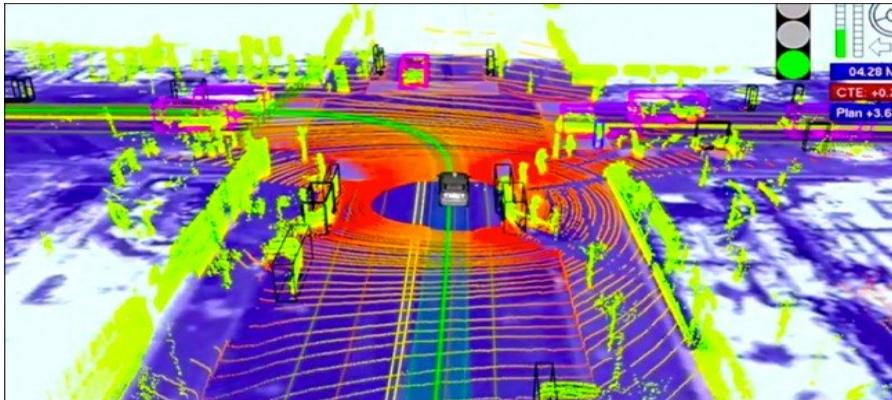


- Not just cars
- Include cars, busses, motorcycles and trucks



What are they?

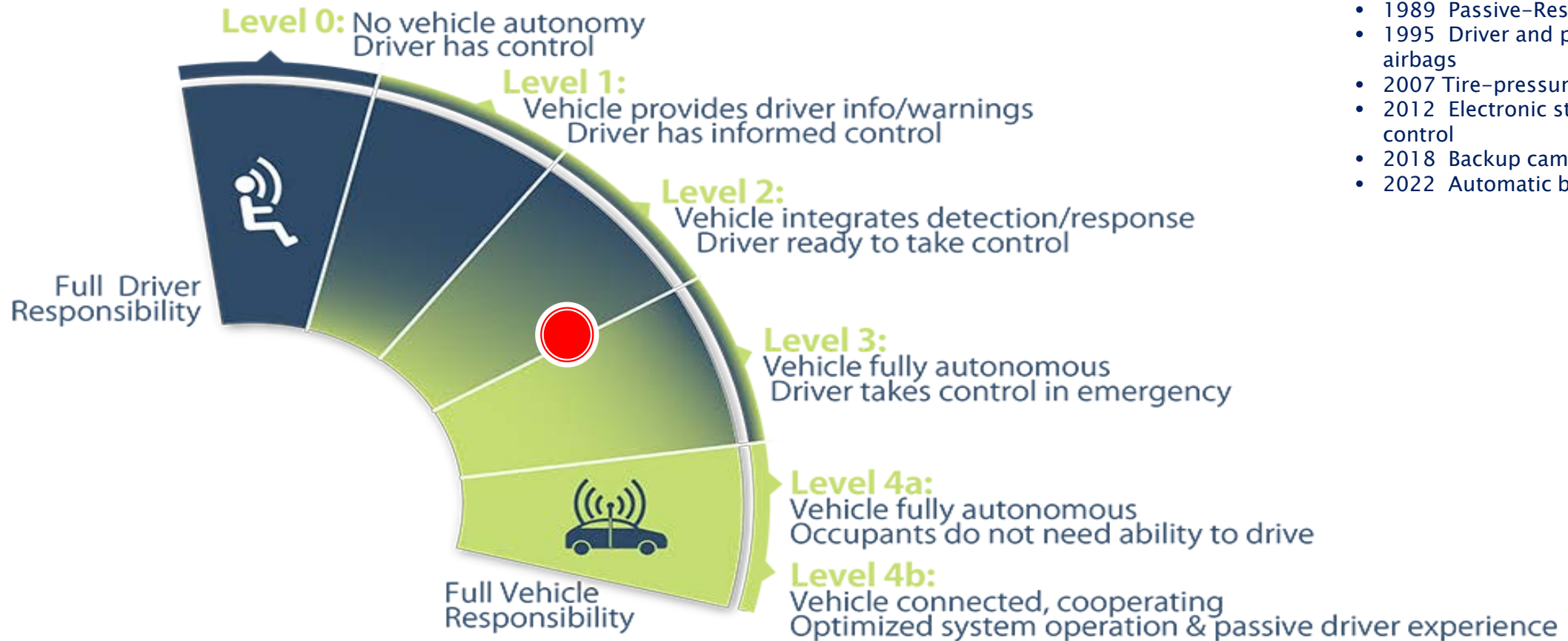
- Use an array of sensors, cameras, radars, real-time 3D mapping and specialized software to “see” the road and its environment.
- Operated by articulators attached to the steering column or pedals (traditional vehicle design).
- Take a constant stream of data coming from all corners of the vehicle and translate it into driving motions.



How do AVs work?

Mandated Safety Features

- 1989 Passive-Restraint System
- 1995 Driver and passenger airbags
- 2007 Tire-pressure monitors
- 2012 Electronic stability control
- 2018 Backup cameras
- 2022 Automatic braking



Degrees of Autonomy

What car companies have to say...

- Audi A8 capable of fully autonomous driving in 2017.
- Elon Musk expects first fully autonomous Tesla by 2018 – approved in 2021.
- Nissan to provide fully autonomous vehicles by 2020.
- BMW to launch autonomous iNext in 2021.
- Uber fleet to be driverless by 2030.
- Many studies and reports seem to agree that AVs should be commonplace by 2040.

When will they arrive?



Advantages of AVs



- Over 80% of car crashes in the US are caused by driver error. With full autonomy, there would be no bad drivers and less mistakes on the roads.
- Drunk and drugged drivers would be a thing of the past.
- Traffic could be coordinated more easily in urban areas to help prevent congestion at busy times. Less need for parking.
- Less congestion would mean that commute times could be reduced drastically.
- Sensory technology could potentially perceive the environment better than human senses, seeing farther ahead, better in poor visibility, detecting smaller and more subtle obstacles, more reasons for less traffic accidents.

Advantages of Autonomous Vehicles

- Parking the vehicle and difficult maneuvering would be less stressful and require no special skills. The car could even just drop you off and then go and park itself.
- People who historically have difficulties with driving, such as disabled people and older citizens, as well as the very young, would be able to experience the freedom of car travel.
- Autonomous vehicles could bring about a massive reduction in insurance premiums for car owners.
- Efficient travel also means fuel savings, cutting costs.
- Reduced need for safety gaps means that road capacities for vehicles would be significantly increased.
- AVs would lead to a reduction in car theft.

Advantages of Autonomous Vehicles

Challenges of AVs



- Privacy – cars will record their (your) every move.
- Need to replace gas tax revenue as a major source of road funding.
- Potential disinvestment in public transit– a Florida State senator is opposing investments in LRT because autonomous vehicles will come online before the project is complete.
- 33% of the population suffers from motion sickness ruling out reading in the vehicle.
- Time required to convert an existing stock of traditional vehicles to autonomous vehicles.
- Resistance of individuals to forfeit control of their cars.

Challenges that need to be overcome

- Overcome consumer concerns about safety
- Implementation of the required legal framework
- Establishment of government regulations
- Loss of driving-related jobs – unions will fight for member's jobs
- Economically challenging in suburban and exurban areas
- Security concerns – hackers and terrorism



Challenges that need to be overcome

➤ Technology Issues:

- Software reliability.
- Massive data required – continually updated
- Need to overcome weather challenges – snow, rain, ice, etc.
- Artificial Intelligence isn't able to function properly in chaotic inner city environments.
- Susceptibility of sensing and navigation systems to deliberate interference, jamming and spoofing.
- Current road infrastructure may need changes for AVs to fully function.

**Challenges that need to be
overcome**

Planning and Design Implications



- Creative opportunity to reimagine cities.
- Autonomous cars are only the beginning of a self-driving (flying) transportation system – busses, trucks, motorcycles and drones.
- With a stress free commute, RAND Corporation predicts that people may live farther out from the urban core creating both sprawl and congestion.
- Possibility of much higher densities – underground garages could be turned into storage spaces for urban dwellers in micro units.
- Opportunity to repurpose parking areas.
- Surface parking lots could be available for commercial and residential development as well as open space.

**Planning and design
implications**

- Excess ROW which is publicly owned could be repurposed and used for affordable housing.
- Traffic lights may become a thing of the past.
- Redesigned urban streets could emphasize pedestrians, bikes and aesthetics.
- Need for a complete revamp of zoning.
- No more gas stations on every major corner – charging stations don't need premium locations.
- More street trees – public works departments will no longer need to consider trees as “immovable objects”
- Less need for breathing masks in places like Beijing and Mexico City.

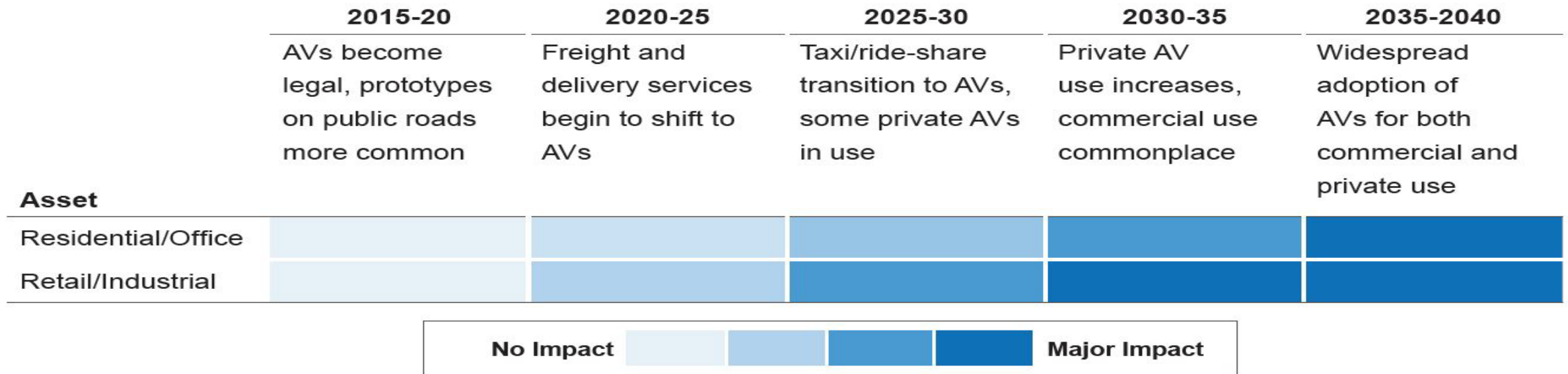
**Planning and design
implications**

- ▶ Highways no longer need to divide communities – they can become grand boulevards that promote vibrancy.



**Planning and design
implications**

Anticipated Timing and Magnitude of Impact by Asset Type

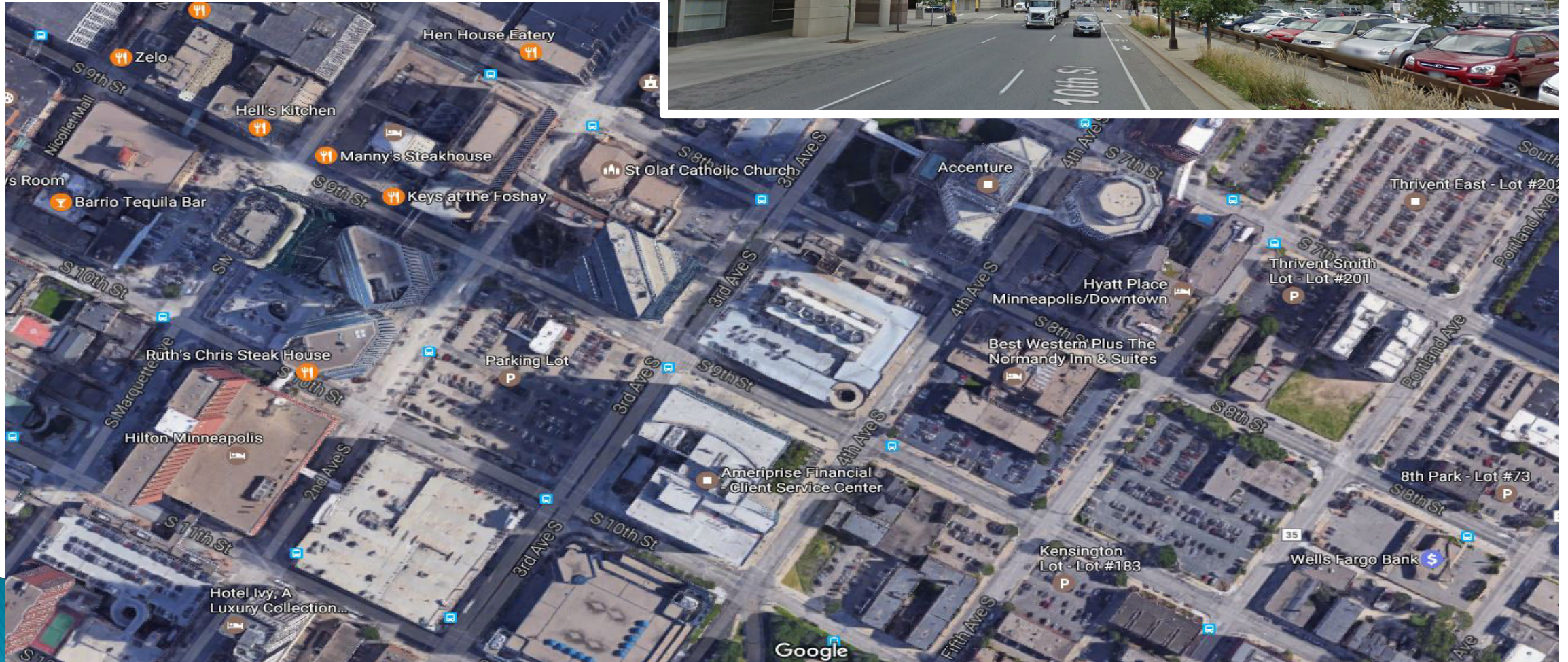
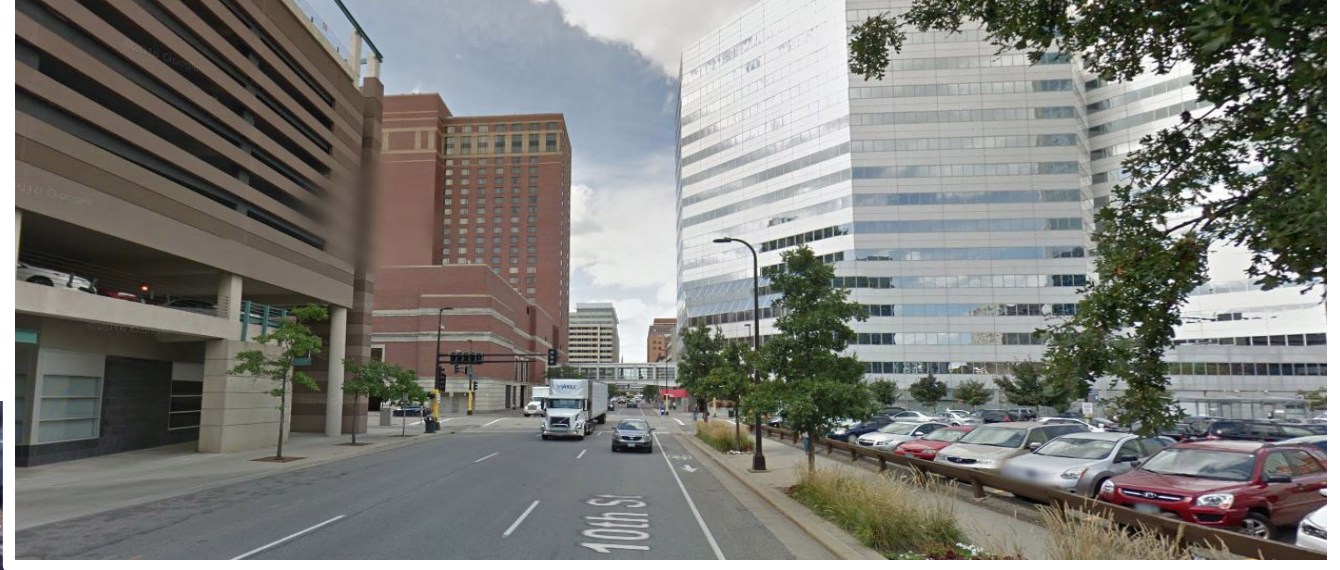


Source: RCLCO

Planning and design
implications

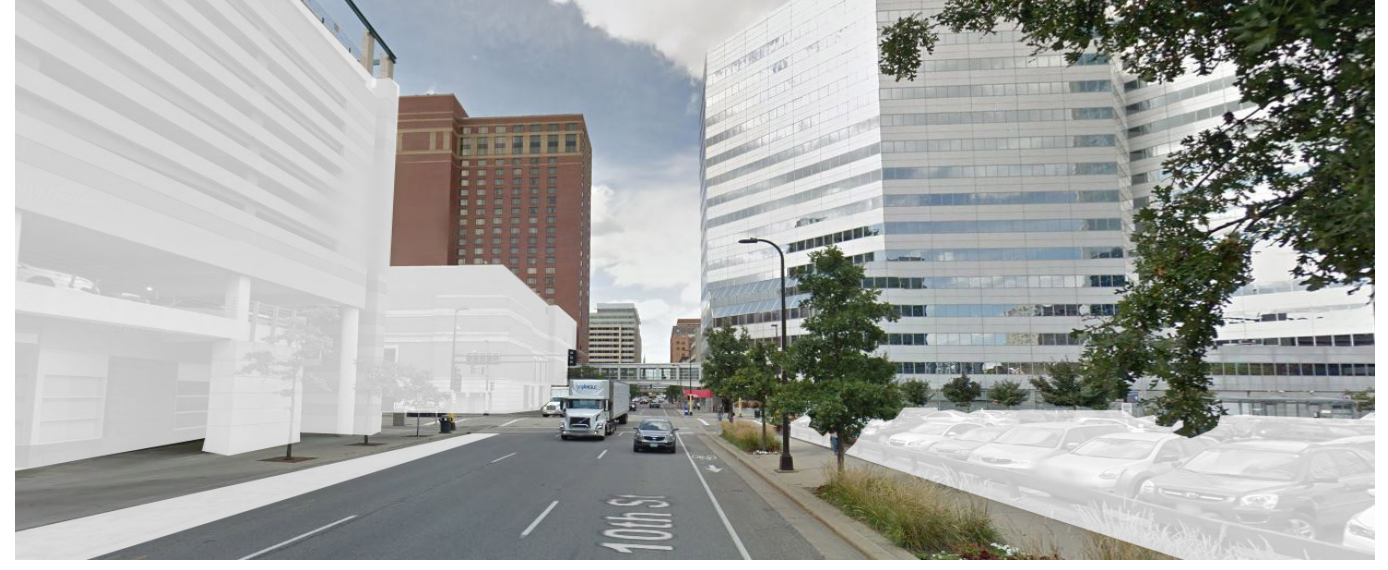
Planning and design implications

Urban Settings



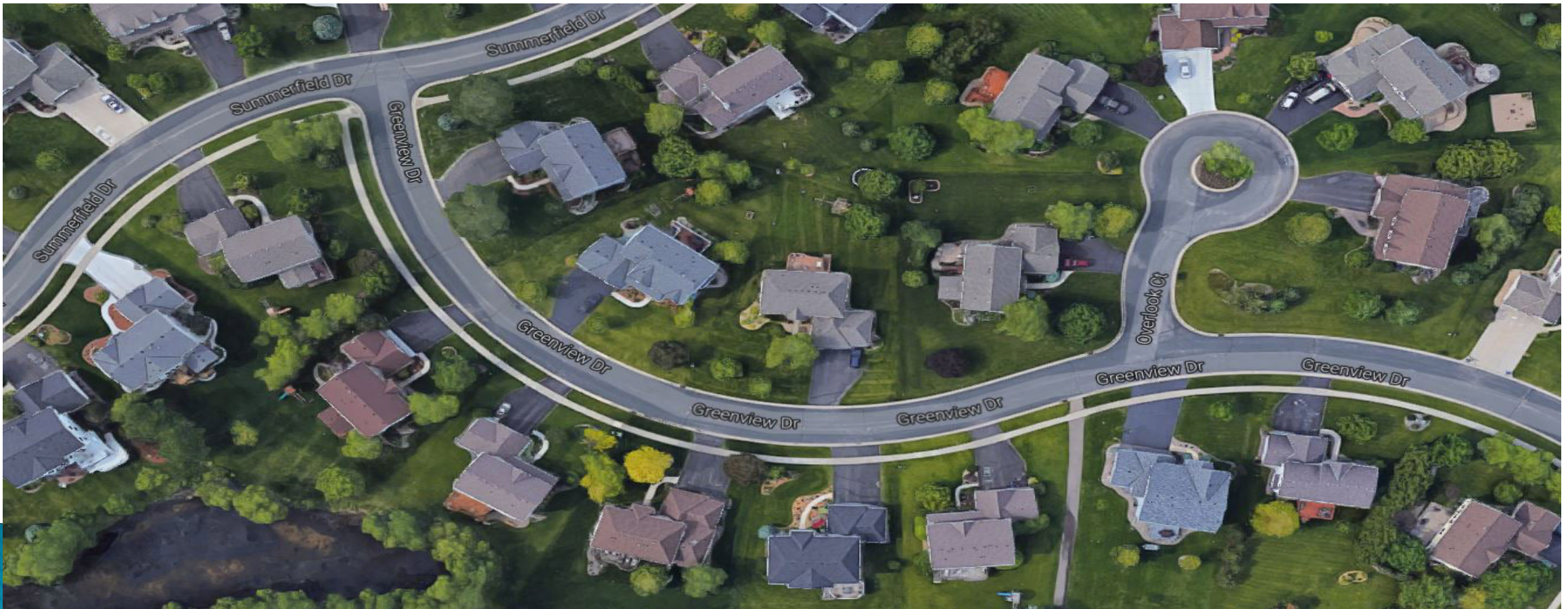
Planning and design implications

Urban Settings



Planning and design implications

Suburban Settings



Planning and design implications

Suburban Settings



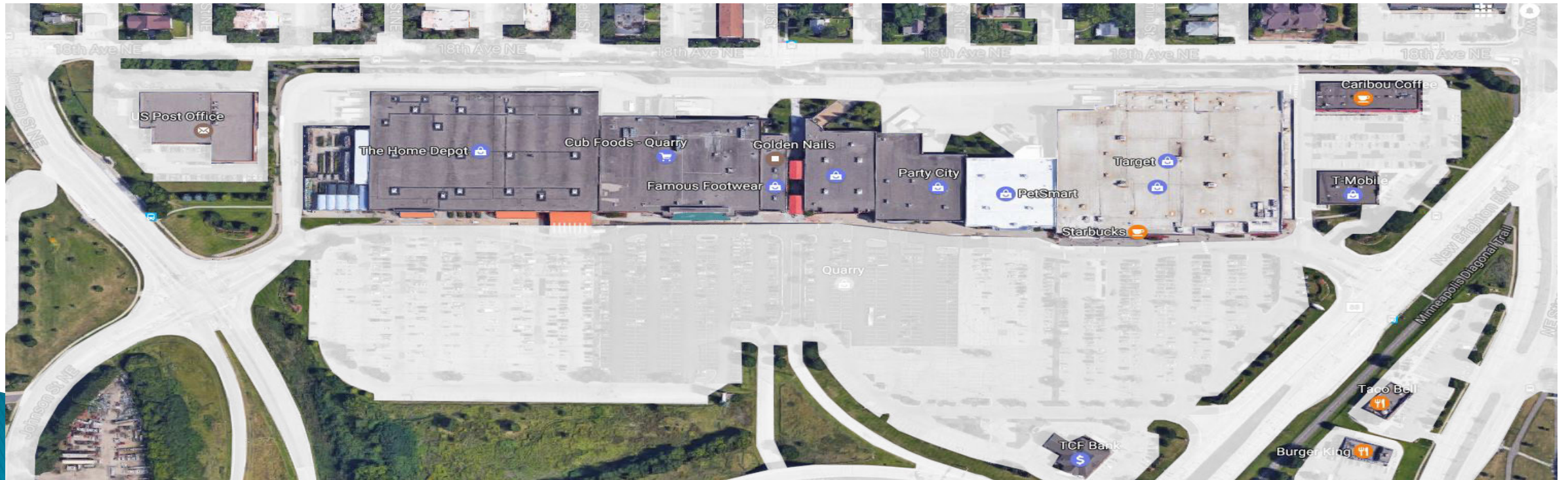
Planning and design implications

Retail



Planning and design implications

Retail



Planning and design implications

Retrofits





To the majority of people who drive, the car is simply a means to an end, and that end is personal transportation.

Change is Inevitable

The Remains of the Car Culture ?



Carhenge – Alliance, Nebraska

How might Autonomous Vehicles change the face of Burnsville in the future?

Next Step

Advisory Panel Meeting – June 19, 2017
Topic – Natural Environment and Parks